

**[2008] [THU0298] ASSOCIATION BETWEEN LUMBAR DISC DEGENERATION AND BIOCHEMICAL MARKERS OF BONE AND CARTILAGE REMODELLING**

**O. Bruyere<sup>1</sup>, J. Collette<sup>1</sup>, C. Christiansen<sup>2</sup>, F. Fardellone<sup>3</sup>, A. Detroz<sup>1</sup>, R. Deroisy<sup>1</sup>, J. Reginster<sup>1</sup>** <sup>1</sup>*Public Health, Epidemiology and Health Economics, University of Liege, Liege, Belgium;* <sup>2</sup>*Center for Clinical and Basic Research, Ballerup, Denmark;* <sup>3</sup>*Rheumatology Department, Hôpital Nord-Université d'Amiens, Amiens, France*

**Objectives:** To investigate whether radiographic lumbar disc degeneration (LDD) is associated with changes in biochemical markers levels of bone and cartilage remodelling.

**Methods:** 2395 postmenopausal women were included in this study. From lateral spine x-ray, four lumbar inter-vertebral spaces (i.e. L1-L2, L2-L3, L3-L4 and L4-L5) were evaluated for the presence and severity of osteophytes, disc space narrowing and sclerosis, following a validated method leading to the calculation of a global LDD score for each intervertebral space (from 0 to 2). Four biochemical markers were assessed: serum C-telopeptide crosslinks of type I collagen (s-CTX I), urinary C-telopeptide crosslink of type II collagen (u-CTX II), serum cartilage oligomeric protein (COMP), and serum YKL-40.

**Results:** 90.1% of the women had prevalent LDD (global score of 1 or 2) on at least one intervertebral space (88.4% when considering only prevalent disc space narrowing, 26.9% for anterior osteophyte, 2.6% for posterior osteophyte and 0.2% for sclerosis). The levels of biochemical markers were not significantly different between patients with prevalent LDD compared to patients without LDD, except for u-CTX II. Indeed, mean (SD) level of u-CTX II was 302 (191) ng/mmol Cr in women with LDD compared to 257 (170) in women without LDD ( $p=0.0003$ ). When considering each individual radiographic features, u-CTX II was also significantly higher in women with presence of disc space narrowing ( $p=0.01$ ) or anterior osteophyte ( $p=0.006$ ) compared to women without these radiographic signs of LDD.

**Conclusion:** Postmenopausal women with radiographic features of LDD are characterized by increased bone cartilage degradation.

Ann Rheum Dis 2008;67(Suppl II):231

**Osteoarthritis Clinical aspects and treatment**

[Close Window](#)